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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,237

04/14/2004

Arie Ben-Bassat

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07/05/2006

E I DU PONT DE NEMOURS AND COMPANY  
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WILMINGTON, DE 19805

EXAMINER

LILLING, HERBERT J

ART UNIT

PAPER NUMBER

1651

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/824,237

Applicant(s)

BEN-BASSAT ET AL.

Examiner

HERBERT J. LILLING

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-27 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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1. Receipt is acknowledged of the CRF statement pertaining to the sequence listing filed April 14, 2004, which has been entered by STIC on April 28, 2004, and a prior art information disclosure statement filed June 01, 2004.

2. Claims 1-27 are present in this instant application.

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4 and 10, drawn to a process for the recovery a multifunctional aromatic compound selected from the group consisting of cinnamic acid, para-hydroxycinnamic acid, and para-hydroxystyrene and mixtures thereof, classified in class 435, multiple subclasses depending upon the compound(s) recovered which subclass includes 136 for CA and mixtures; 146 for pHCA or 156 for pHS.

Claims 5-9 are improper since the claims do not further limit or drawn to the multifunctional aromatic compound selected from the group consisting of cinnamic acid, para-hydroxycinnamic acid, and para-hydroxystyrene and mixtures thereof.

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- II. Claims 11-25, drawn to process for the production of a multifunctional aromatic compound comprising providing a production host which produces a multifunctional aromatic compound selected from the group consisting of cinnamic acid, para-hydroxycinnamic acid, and para-hydroxystyrene and mixtures thereof which includes growing a production host classified in class 435, classified multiple subclasses depending upon the compound(s) recovered.

Claims 26-27 are improper since the claims do not further limit or drawn to the multifunctional aromatic compound selected from the group consisting of cinnamic acid, para-hydroxycinnamic acid, and para-hydroxystyrene and mixtures thereof.

If Applicant amends claims 5-9 to be independent claims, the claims will be restricted as follows:

- III. Claims 5-9, drawn to multifunctional aromatic derivatized compound(s) of cinnamic acid, para-hydroxycinnamic acid, and para hydroxystyrene, and mixtures thereof, classified in Class 435, subclass depending upon the derivatized compound(s).

If Applicant amends claims 26-27 to be independent claims, the claims will be restricted as follows:

- IV. Claims 26-27, drawn to a process for the production of derivatized compounds cinnamic acid, para-hydroxycinnamic acid, and para

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hydroxystyrene, and mixtures thereof which process includes providing a production host which produces a multifunctional aromatic compound selected from the group consisting of cinnamic acid, para-hydroxycinnamic acid, and para-hydroxystyrene and mixtures thereof which includes growing a production host, classified in Class 435, subclasses depends upon the derivatized compound(s).

4. Inventions in group I and II are separate and distinct processes. Inventions are separate and distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP Paragraph 806.04, MPEP Paragraph 808.01). In the instant case they involve different steps and use of different product.

Invention I is drawn to the process of recovering compounds whereas Invention II is drawn to the process of preparing compounds. Invention I does not require the specifics of Invention II. The two processes are patentably distinct from each other.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper. The computerized search of the multiple data banks would be extremely burdensome to search and examine the additional inventions.

5. This application contains claims directed to the following patentably distinct species:

A. Whereby the compound is selected from the group consisting of :

i. cinnamic acid,

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- ii. para-hydroxycinnamic acid,
- iii. para-hydroxystyrene
- or
- iv. mixtures thereof-please specify the mixture.

B. Whereby the extractant is selected from the group consisting of :

- a. diisopentyl ether,
- b. n-propyl benzoate,
- c. 2-undecanone,
- d. dibenzyl ether,
- e. 2-tridecanone,
- f. 2-decanone,
- g. 1-phenyl-1-pentanone,
- h. methyl decanoate,
- i. 1-undecanol,
- j. diisobutyl DBE-IB,
- or
- k. mixtures thereof-please specify.

C. Whereby the medium is:

- 1. monophasic,
- 2. biphasic,
- 3. other-please specify.

D. Whereby the production host is selected from the group:

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- Da. Escherichia,
  - Daa. Escherichia coli,
  - Dab. Escherichia other-please specify.
- Db. Methylosinus,
- Dc. Methylomonas,
- Dd. Pseudomonas,
  - Dda. Pseudomonas putida,
  - Ddb. Pseudomonas other-please specify.
- De. Streptomyces,
- Df. Corynebacterium,
- Dg. Rhodobacter
- Or
- Dh. Other-please specify.

If Invention III is selected upon amendment to the specification, the following additional elections will be required:

- E. Whereby the derivatized compound is defined:
  - 1. First formula whereby  $R_1$  is selected from the group consisting of:
    - a. allyl,
    - b. methyl, ethyl, n-butyl or other straight chain alkyl,
    - c. t-butyl,
    - d. benzyl,

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- e. phenyl,
- f. hydroxyethyl,
- g. vinyl,
- h. methoxyethyl,
- i. glycidyl
- or
- j. other-please specify

2. Second Formula wherein  $R_2$  is selected from the group consisting of:

- a. H,
- b.  $NH_2$ ,
- c. benzyl,
- d. cyclohexyl
- e. phenethyl,
- or
- f. other-please specify.

3. Third Formula wherein  $R_3$  is selected from the group consisting of:

- a. acetoxy,
- b. sulfonic acid,
- c. a long chain alkyl,
- d. ethoxycarbonyl,



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- e. trimethylsilyl,
- f. t-butyldimethylsilyl,
- g. diethyl phosphonate,
- h. diethyl phosphate,
- or
- i. other please specify.

4. Formula 4 whereby  $R_4$  is selected from the group consisting

:

- a. methyl, alkyl
- b. t-butyl,
- c. silyl ethers,
- d. allyl,
- e. t-butoxy carbonyl,
- f. hydroxyethoxy,
- g. acetoxy,
- h. formate,
- i. glycidyl,
- j. benzoate,
- k. phenylcarbonate,
- l. tetrahydropyran,
- m. benzyl,
- n. poly(ethylene oxide),
- or

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- o. other-please specify.

The species are independent or distinct because of the different process steps or different moieties that are requires additional searches as well as different search strategies, which would be extremely burdensome.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic to all of the above requirements.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

6. Applicant is advised that the reply to this requirement to be complete must **include**:

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**(i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143)**

**and**

**(ii) identification of the claims encompassing the elected invention.**

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103 (a) of the other invention.

**It is kindly requested that if Applicant requires any assistance in any of the above elections, please contact this Examiner.**

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of

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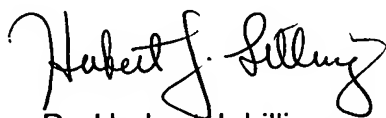
at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Examiner Lilling whose telephone number is 571-272-0918 and Fax Number is (703) 872-9306** or SPE Michael Wityshyn whose telephone number is 571-272-0926. Examiner can be reached Monday-Thursday from about 5:30 A.M. to about 3:00 P.M. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 1651  
June 26, 2006



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